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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,881	06/16/2005	Heike Gregorius	09086-00227-US	5005

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BASELL USA INC.
INTELLECTUAL PROPERTY
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EXAMINER

LU, C CAIXIA

ART UNIT	PAPER NUMBER
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1713

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,881	GREGORIUS ET AL.	
	Examiner	Art Unit	
	Caixia Lu	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 16-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 does not share the same scope as the original claim 1 filed previously. The original claim 1 is claiming a process of making a catalyst comprising a) combining a support such as silica with aluminoxane to form a treated support and subsequently (b) contacting the treated support with the reaction product of a metallocene compound and alkylaluminum of formula (VIII). However, the current claim 16 is claiming a process of making said catalyst comprising a) combining a support such as silica with aluminoxane to form a treated support and subsequently (b) reacting a metallocene compound and alkylaluminum of formula (VIII). The description on page 5, lines 6-7 is ungrammatical, the examiner suggest changing the current claim language back to the original language as filed in original claim 1. The limitation, "the suspension medium is removed by evaporation after the metallocene compound of formula (I) is reacted with the at least one organometallic compound of formula (VIII)", is not in the claims previously filed.

Claim Rejections - 35 USC § 102

2. Claims 16-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Suhm et al. (WO 01/46274, the equivalent US 2003/0130443 is referred hereinafter).

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Suhm's paragraphs [0311] to [0313] on page 14 as cited in the previous Office action teaches a process for making a supported catalyst comprising (i) reacting silica and methylaluminoxane (MAO) in a solution to provide a treated silica; subsequently (ii) contacting the solution of dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride and MAO with the treated silica to provide a slurry, and (iii) distilling off the solvent in vacuo to provide free-flowing catalyst particulate. It is understood that MAO used in the lab is actually a mixture of methylaluminoxane and trimethyl aluminum, thus, the solution of dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride and MAO comprising the product of dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride and trimethyl aluminum. Thus, Suhm's solution of dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride and MAO comprises the reaction product of dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride and trimethyl aluminum. Therefore, Suhm's teaching anticipates the instant claims.

Claim Rejections - 35 USC § 103

3. Claims 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama et al. (US 6,339,128) and Suhm et al. (WO 01/46274, the equivalent US 2003/0130443 is referred hereinafter).

Suhm's teaching is relied upon as shown above. It is noted the cited prior art does not expressly teach contacting the metallocene and the trialkyl aluminum alone prior to contacting the alumoxane treated support. It is noted that the metallocene complex of the cited prior art are chlorinated metallocene which often has poor solubilities

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in hydrocarbons, the chlorinated metallocenes are routinely treated with alkyl aluminum before use to provide the alkylated metallocene with improved solubilities in the reaction media.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ treat the chlorinated metallocene complex with alkyl aluminum to provide an alkylated metallocene with improved solubility in the reaction media to provide a supported catalyst with minimized unsupported metallocene and thus reduce fouling during the polymerization process and in the absence of any showing criticality and unexpected results. When the alkylated metallocene prepared by treating the chlorinated metallocenes with alkyl aluminum is used to prepare the catalyst composition, the teaching of the cited prior art meets the limitation of the instant claims.

Response to Arguments

4. Applicant's arguments filed October 23, 2006 have been fully considered but they are not persuasive. Applicants have not yet specifically indicated which claimed limitation is not taught or rendered to be obvious in the cited prior, thus, the rejection is still deemed to be proper and maintained.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu'.

Caixia Lu, Ph. D.
Primary Examiner